BWR | Right in the Center

Use Attainability Analysis

for

WBID 484 Tributary to Wilson Creek

Submitted by
BWR

June 1, 2007

Submitted to:
Missouri Department of Natural Resources
Division of Environmental Quality
Water Protection Program

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A - Water Body Identification

I. Water Body Information (For water body being surveyed)

Water Body Name (from USGS 7.5' quad):	Tributary to Wilson Creek
Missouri Water Body Identification (WBID) Number:	484
8-digit HUC:	1028 0101
County:	Nodaway
Upstream Legal Description (from Table H):	unknown
Downstream Legal Description (from Table H):	unknown
Number of sites evaluated	3
List all sites numbers, listed consequently upstream to downstream:	1,2,3

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest.

II. Subegmentation (fill this section out only in cases where subesgmentation is being proposed)

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)

Upstream Coordinates: UTM X Y	Downstream Coordinates: UTM X Y

HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)

Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			

HORIZONTAL ACCURACY ESTIMATE

GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other	
EPE	± _____ Feet or ± _____ Meters	_____	
PDOP		± _____ Feet or ± _____ Meters	

III. Discharger Facility Information (list all permitted dischargers on the stream)

Discharger Facility Name(s):	Conception Abbey Lagoon
Discharger Permit Number(s):	MO0048771

IV. UAA Surveyor (please print legibly)

Name of Surveyor Ryan Lutz	Telephone Number: (816) 363-2096
Organization/Employer: BWR	
Position: Environmental Scientist	

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.
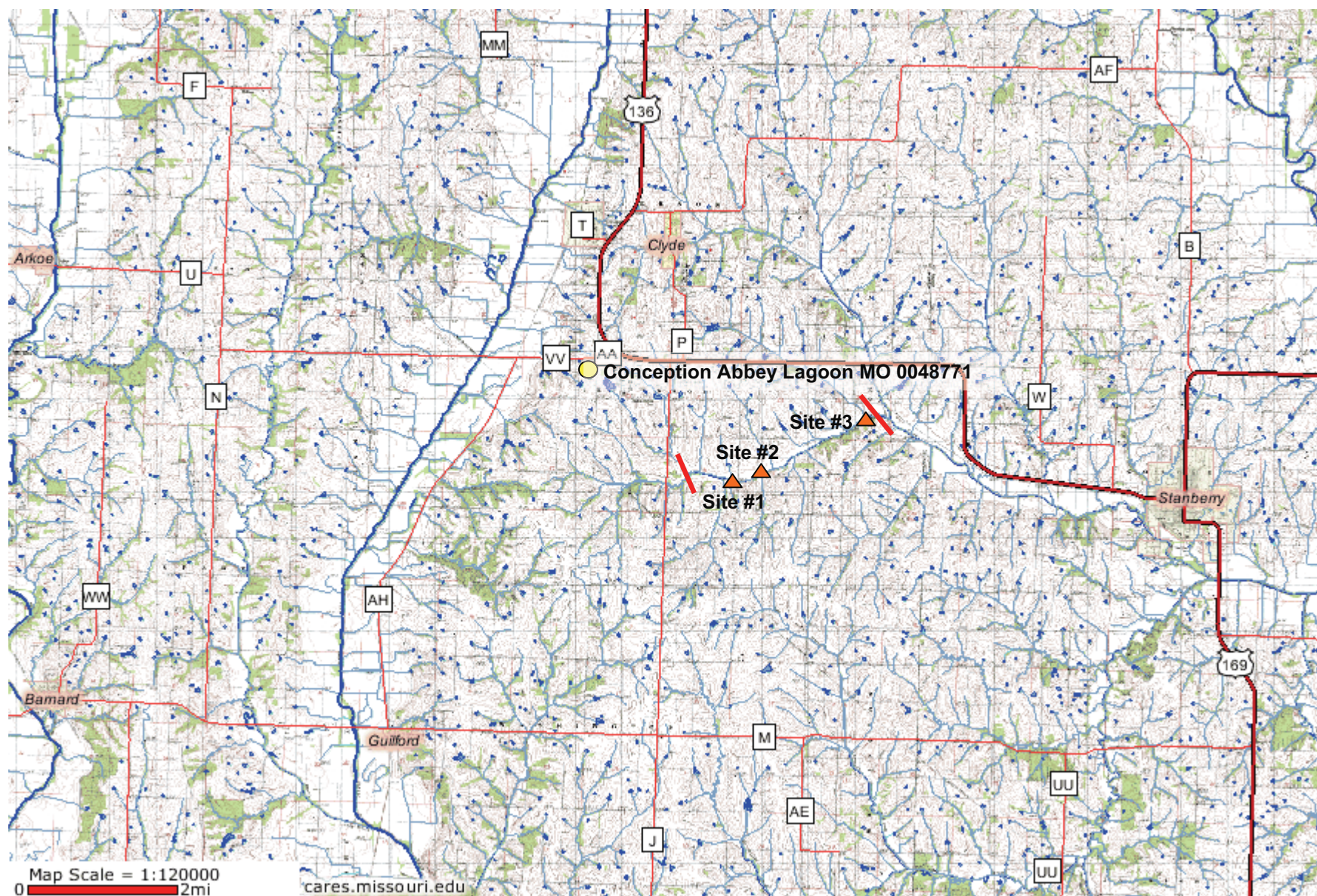
Signed: _Ryan M. Lutz_   Date: 05-27-07

Tributary to Wilson Creek
WBID #484

Map Scale = 1:120000
0 _____ 2mi
cares.missouri.edu

Conception Abbey Lagoon MO 0048771

Site #1
Site #2
Site #3

Clyde
Stanberry
Arkoe
Bamard
Guilford

BWR
Right in the Center

N

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

Date & Time: 5/27/07	Site Location Description (e.g., road crossing): Bridge Crossing- onion Rd. (150 m upstream)
Personnel (Data Collectors): Ryan Lunt / Sadie	
Current Weather Conditions: Sunny	Facility Name: Conception Abbey Lagoon
Weather Conditions for Past 10 days: Rain	Permit Number: MO0048771
Drought Conditions?: No drought ☑; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐	

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION IN METERS)

Site GPS Coordinates: UTM X: 094.65250 ° W   Y: 40.21943 °N

HORIZONTAL COLLECTION METHOD (indicate the method used to determine the locational data.)

Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			

HORIZONTAL ACCURACY ESTIMATE

GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE	± 70 Feet or ± _____ Meters	
PDOP		± _____ Feet or ± _____ Meters

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
34	Transect I-J	33	Transect B→A	100-28,29, 31,32	upstream, R bank, downstream, L bank 300° Trans A

Uses Observed*: (Uses actually observed at time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☑ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Campgrounds
☐ Boating accesses	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ No trespass sign	☐ Fence	☐ Steep slopes	☑ None of the above	☐ Other:

Comments:

Indications of Human Use*: (attach photos)

☑ Roads	☐ Rope swings	☐ Foot paths/prints	☐ Dock/platform	☐ Livestock Watering	☐ RV / ATV Tracks
☐ Camping Sites		☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Other:

Comments:

* Page Two – Data Sheet B for WBID # ___484 : Site 1___
Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

0 % Cobble	0 % Gravel	13 % Sand	12 % Silt	75 % Mud/Clay	0 % Bedrock

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

Much woody debris brought down from previous hard rains suspended solids in water; far above base flow

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☑ None	☐ Other:
Color:	☐ Clear	☐ Green	☑ Gray	☐ Milky	☐ Other:
Bottom Deposit:	☐ Sludge	☐ Solids	☑ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☑ None	☐ Other:

Comments: Please attach any additional comments () to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature:___Ryan M. Lunt___ Date of Survey:__05-27-07__

Organization:__SETI__ Position:__Environmental Scientist__

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 1

Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect A 1 wetted width	.3			1 Channel Feature :	
2 5m m	.3			2 Run	
3	.3			3	
4 measurements	.3			4 Dissolved Oxygen	
5 .5 m	.3			5	
6 apart	.3			6 9.8	ppm
7	.2			7 98 %	
8	.2			8	
9	.2			9	
10	.1			10	
Transect B 1 wetted width	.1			11	
2 6 m	.3			12 Channel Feature :	
3	.3			13 Run	
4 measurements	.3			14	
5 .6 m	.3			15 Dissolved Oxygen :	
6 apart	.2			16	
7	.2			17 9.1	ppm
8	.2			18 91 %	
9	.2			19	
10	.2			20	
				21	
Transect C 1 wetted width	.2			22	
2 6 m	.3			23 Channel Feature :	
3	.4			24 Run	
4 measurements	.2			25	
5 .6 m	.2			26 Dissolved Oxygen	
6 apart	.2			.	
7	.2			. 9.2	ppm
8	.1			. 93 %	
9	.1			n	
10	.1				

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _Ryan M. Lint_   Date: _05-27-07_

Organization: _SETX_   Position: _Environmental Scientist_

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Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect D 1	wetted width	.2		1 Channel Feature:	
2	3 m	.3		2 Run	
3		.3		3	
4	measurements	.3		4 Dissolved Oxygen	
5	.3 m	.3		5	
6	apart	.3		6 9.02 ppm	
7		.3		7 91 %	
8		.2		8	
9		.1		9	
10		.1		10	
				11	
Transect E 1	wetted width	.1		12 Channel Feature:	
2	4 m	.3		13 Run	
3		.3		14	
4	measurements	.3		15 Dissolved Oxygen:	
5	.4 m	.3		16	
6	apart	.3		17 9.0 ppm	
7		.2		18 91 %	
8		.2		19	
9		.1		20	
10		.1		21	
				22	
Transect F 1	wetted width	<.1		23 Channel Feature:	
2	4 m	.2		24 Run	
3		.2		25	
4	measurements	.3		26 Dissolved Oxygen	
5	.4 m	.3		.	
6	apart	.4		. 9.0 ppm	
7		.3		. 91 %	
8		.3		.	
9		.2		n	
10		.1			

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _Ryan M. Lunt_   Date: _05-27-07_

Organization: _SETZ_   Position: _Environmental Scientist_

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # __484__   Site # __1__

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect G 1	wetted width	.1		1 Channel Feature :	
2	2.5 m	.2		2 Run	
3		.3		3	
4	measurements	.3		4 Dissolved Oxygen	
5	.25 m	.3		5	
6	apart	.3		6 9.1 ppm	
7		.4		7 91 %	
8		.3		8	
9		.2		9	
10		.1		10	
				11	
Transect H 1	wetted width	.1		12 Channel Feature :	
2	3 m	.2		13 Run	
3		.3		14	
4	measurements	.3		15 Dissolved Oxygen :	
5	.3 m	.4		16	
6	apart	.3		17 9.0 ppm	
7		.3		18 90 %	
8		.2		19	
9		.3		20	
10		.3		21	
				22	
Transect I 1	wetted width	.3		23 Channel Feature :	
2	3.5 m	.3		24 Run	
3		.3		25	
4	measurements	.3		26 Dissolved Oxygen	
5	.35 m	.3		.	
6	apart	.4		. 9.0 ppm	
7		.3		. 90 %	
8		.2		.	
9		.2		n	
10		.2			

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Signed: _Ryan M. Lunt_   Date: _05-27-07_

Organization: _SETI_   Position: _Environmental Scientist_

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Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 1

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect 1 1	wetted width	.1			1 Channel Feature :	
2	4 m	.2			2 Run	
3		.2			3	
4	measurements	.3			4 Dissolved Oxygen	
5	.4 m	.4			5	
6	apart	.3			6 9.0 ppm	
7		.3			7 90 %	
8		.3			8	
9		.3			9	
10		.2			10	
					11	
Transect 2 1	wetted width	.2			12 Channel Feature :	
2	4.5 m	.3			13 Run	
3		.3			14	
4	measurements	.3			15 Dissolved Oxygen :	
5	.45 m	.3			16	
6	apart	.3			17 9.0 ppm	
7		.2			18 91 %	
8		.2			19	
9		.2			20	
10		.2			21	
					22	
Transect 3 1	wetted width				23 Channel Feature :	
2	____ m				24	
3					25	
4	measurements				26 Dissolved Oxygen	
5	____ m				.	
6	apart				. ppm	
7					. %	
8					.	
9					n	
10						

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _Ryan M. Lunt_   Date: _05-27-07_

Organization: _SETL_   Position: _Environmental Scientist_

Field Data Sheets for Recreational Use Stream Surveys
Data Sheet B - Site Characterization
(must be completed for each site)

Date & Time: 5/27/07	Site Location Description (e.g., road crossing): Road crossing → orion Rd (150 m downstream
Personnel (Data Collectors): Ryan Lunt, SR	
Current Weather Conditions: Sunny	Facility Name: Conception Abbey Lagoon
Weather Conditions for Past 10 days: Rain / Sun	Permit Number: M000 48 777

Drought Conditions?: No drought ☑; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION IN METERS)

Site GPS Coordinates: UTM X: 094.64878 °W   Y: 40.21941 °N

HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)

Global Positioning System (GPS)			Interpolation	
Static Mode			Topographic Map or DRG	
Dynamic Mode (Kinematic)			Aerial Photograph or DOQQ	
Precise Positioning Service			Satellite Imagery	
Signal Averaging			Interpolation Other	
Real Time Differential Processing				

HORIZONTAL ACCURACY ESTIMATE

GPS Data Quality			Interpolation Data Quality	
FOM	± __20__ Meters		Source Map Scale: 1:24,000 1:100,000 Other _____	
EPE	± __20__ Feet or ± _____ Meters			
PDOP			± _____ Feet or ± _____ Meters	

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
40	J-K	39	A-B	35,36, 37,38	Trans. A 300 → upstream, Q bank, downstream, L bank

Uses Observed*: (Uses actually observed at time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☑ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Campgrounds
☐ Boating accesses	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ No trespass sign	☐ Fence	☐ Steep slopes	☑ None of the above	☐ Other:

Comments:

Indications of Human Use*: (attach photos)

☑ Roads	☐ Rope swings	☐ Foot paths/prints	☐ Dock/platform	☐ Livestock Watering	☐ RV / ATV Tracks
☐ Camping Sites		☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Other:

Comments:

* Page Two – Data Sheet B for WBID # 484 : Site 2

Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes   ☐ No

If so, is there an obvious current?   ☐ Yes   ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes   ☐ No

If so, is there an obvious current?   ☐ Yes   ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

25 % Cobble	20 % Gravel	10 % Sand	% Silt	30 % Mud/Clay	15 % Bedrock

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

none in water channel.
detritus in channel.

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☑ None	☐ Other:
Color:	☐ Clear	☐ Green	☑ Gray	☐ Milky	☐ Other:
Bottom Deposit:	☐ Sludge	☐ Solids	☑ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☑ None	☐ Other:

Comments: Please attach any additional comments () to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: _Ryan M Lunt_   Date of Survey: _05-22-07_

Organization: _SETZ_   Position: _Environmental_

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect A 1	wetted width	.1		1	Channel Feature :
2	5.5 m	.2		2	Run
3		.3		3	
4	measurements	.3		4	Dissolved Oxygen
5	.55 m	.3		5	
6	apart	.3		6	8.8 ppm
7		.4		7	89 %
8		.2		8	
9		.2		9	
10		.1		10	
				11	
Transect B 1	wetted width	.1		12	Channel Feature :
2	4.5 m	.3		13	Run
3		.4		14	
4	measurements	.4		15	Dissolved Oxygen :
5	.45 m	.4		16	
6	apart	.3		17	9.3 ppm
7		.3		18	94 %
8		.2		19	
9		.1		20	
10		.1		21	
				22	
Transect C 1	wetted width	.2		23	Channel Feature :
2	2.5 m	.2		24	Riffle
3		.3		25	
4	measurements	.4		26	Dissolved Oxygen
5	.25 m	.3		.	
6	apart	.2		.	8.9 ppm
7		.2		.	90 %
8		.3		.	
9		.2		n	
10		.1			

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _Ryan M. Lund_   Date: _05-22-07_

Organization: _SETI_   Position: _Environmental Scientist_

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Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect D 1	wetted width	.1		1 Channel Feature :	
2	4.5 m	.2		2 Run	
3		.4		3	
4	measurements	.3		4 Dissolved Oxygen	
5	.45 m	.3		5	
6	apart	.3		6 8.8 ppm	
7		.3		7 89 %	
8		.3		8	
9		.2		9	
10		.1		10	
				11	
Transect E 1	wetted width	.2		12 Channel Feature :	
2	6 m	.5		13 Run	
3		.5		14	
4	measurements	.4		15 Dissolved Oxygen :	
5	.6 m	.3		16	
6	apart	.2		17 8.9	
7		.1		18 90 ppm %	
8		.1		19	
9		.1		20	
10		.1		21	
				22	
Transect F 1	wetted width	.1		23 Channel Feature :	
2	3 m	.2		24 Run	
3		.3		25	
4	measurements	.3		26 Dissolved Oxygen	
5	.3 m	.3		.	
6	apart	.3		. 8.9 ppm	
7		.2		. 90 %	
8		.2		n	
9		.1			
10		.1			

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth t the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _Ryan Mc Leuro_   Date: _05-27-07_

Organization: _SETL_   Position: _Environmental Scientist_

February 5, 2007

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect G 1	wetted width	.1		1 Channel Feature :	
2	____ m	.2		2 Run	
3		.2		3	
4	measurements	.2		4 Dissolved Oxygen	
5	.7 m	.2		5	
6	apart	.2		6 8.8	ppm
7		.2		7 89	%
8		.2		8	
9		.2		9	
10		.3		10	
Transect H 1	wetted width	.1		11	
2	4 m	.1		12 Channel Feature :	
3		.4		13 Run	
4	measurements	.3		14	
5	.4 m	.4		15 Dissolved Oxygen :	
6	apart	.4		16	
7		.4		17 8.9	ppm
8		.4		18 91	%
9		.2		19	
10		.1		20	
Transect I 1	wetted width	.1		21	
2	0 m	.2		22	
3		.2		23 Channel Feature :	
4	measurements	.2		24 Run	
5	.10 m	.3		25	
6	apart	.2		26 Dissolved Oxygen	
7		.2		. 8.8	ppm
8		.2		. 89	%
9		.2		n	
10		.2			

If there is an odd number of entries find middle rank $[(n+1)/2]$. The corresponding sorted value depth to the middle rank is the median depth.
If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _Ryan M. Lint_   Date: _05-22-07_

Organization: _SETI_   Position: _Environmental Scientist_

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect 1 — 1	wetted width	.3		1 Channel Feature :	
2	5 m	.3		2 Run	
3		.4		3	
4	measurements	.3		4 Dissolved Oxygen	
5	.5 m	.3		5	
6	apart	.3		6 8.9 ppm	
7		.2		7 90 %	
8		.2		8	
9		.1		9	
10		.1		10	
Transect 2 — 1	wetted width	.1		11	
2	5 m	.2		12 Channel Feature :	
3		.3		13 Run	
4	measurements	.3		14	
5	.5 m	.3		15 Dissolved Oxygen :	
6	apart	.3		16	
7		.2		17 8.9 ppm	
8		.2		18 90 %	
9		.2		19	
10		.1		20	
Transect 3 — 1	wetted width			21	
2	m			22	
3				23 Channel Feature :	
4	measurements			24	
5	m			25	
6	apart			26 Dissolved Oxygen	
7				.	
8				.	ppm
9				.	%
10				n	

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Ryan M. Lunt   Date: 05-37-07

Organization: SOTE   Position: Environmental Scientist

February 5, 2007

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WBID# 484
Site# 3

Date & Time: 5/27/07	Site Location Description (e.g., road crossing): Trans A - 20m Bridge crossing @ Popcorn Rd
Personnel (Data Collectors): Ryan Hunt, JR	
Current Weather Conditions: Sunny	Facility Name: Conception Abbey Lagoon
Weather Conditions for Past 10 days: Rain	Permit Number: Mo 0048771

Drought Conditions?: No drought ☑; Phase I ☐; Phase II ☐; Phase III ☐; Phase IV ☐; Unknown ☐

Site Locations:

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION IN METERS)

Site GPS Coordinates: UTM X: 094.61502° W   Y: 40.23237° N

HORIZONTAL COLLECTION METHOD (indicate the method used to determine the locational data.)

Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			

HORIZONTAL ACCURACY ESTIMATE

GPS Data Quality		Interpolation Data Quality	
FOM	±_____Meters	Source Map Scale: 1:24,000 1:100,000 Other_____	
EPE	± 20 Feet or ±_____Meters		
PDOP		±_____Feet or ±_____Meters	

Photos:

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
46	J→K	45	C→B	41,42,43,44	300°- Trans. A, upstream R, downstream, l

Uses Observed*: (Uses actually observed at time of survey.)

☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting
☐ Hunting	☐ Trapping	☐ Fishing	☑ None of the above	☐ Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

☐ City/county parks	☐ Playgrounds	☐ MDC conservation lands	☐ Urban areas	☐ Campgrounds
☐ Boating accesses	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway
☐ No trespass sign	☐ Fence	☐ Steep slopes	☑ None of the above	☐ Other:

Comments:

Indications of Human Use*: (attach photos)

☑ Roads	☐ Rope swings	☐ Foot paths/prints	☐ Dock/platform	☐ Livestock Watering	☐ RV / ATV Tracks
☐ Camping Sites	☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Other:	

Comments:

* Page Two – Data Sheet B for WBID # 484 : Site 3

Stream Morphology:

Upstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Downstream View's Physical Dimensions: Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

Select one of the following channel features:

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN					
POOL					

Substrate*: (These values should add up to 100%.)

% Cobble	10 % Gravel	5 % Sand	% Silt	85 % Mud/Clay	% Bedrock

Aquatic Vegetation*: (Note amount of vegetation or algal growth at the assessment site)

none in channel.
detritus present inside bank.

Water Characteristics*: (Mark all that apply.)

Odor:	☐ Sewage	☐ Musky	☐ Chemical	☑ None	☐ Other:
Color:	☐ Clear	☐ Green	☑ Gray	☐ Milky	☐ Other:
Bottom Deposit:	☐ Sludge	☐ Solids	☑ Fine sediments	☐ None	☐ Other:
Surface Deposit:	☐ Oil	☐ Scum	☐ Foam	☑ None	☐ Other:

Comments: Please attach any additional comments () to this form.

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: _Ryan M. Lunt_ Date of Survey: _05-27-07_

Organization: _SETI_ Position: _Environmental Scientist_

February 5, 2007

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Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 3

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect A 1	wetted width	.2			1 Channel Feature :	
2	5.5 m	.3			2 Run	
3		.2			3	
4	measurements	.3			4 Dissolved Oxygen	
5	.55 m	.4			5	
6	apart	.3			6 8.6 ppm	
7		.3			7 90 %	
8		.3			8	
9		.2			9	
10		.2			10	
Transect B 1	wetted width	.1			11	
2	5.5 m	.3			12 Channel Feature :	
3		.4			13 Run	
4	measurements	.3			14	
5	.55 m	.3			15 Dissolved Oxygen :	
6	apart	.4			16	
7		.4			17 8.7 ppm	
8		.3			18 91 %	
9		.3			19	
10		.2			20	
Transect C 1	wetted width	.1			21	
2	5.5 m	.3			22	
3		.2			23 Channel Feature :	
4	measurements	.2			24 Run	
5	.55 m	.3			25	
6	apart	.3			26 Dissolved Oxygen	
7		.3			.	
8		.3			. 8.6 ppm	
9		.2			. 91 %	
10		.1			n	

If there is an odd number of entries find middle rank [(n+1)/2]. The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: _Rylan M. Lunt_   Date: _05-27-07_

Organization: _SJRI_   Position: _Environmental Scientist_

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Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 3

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
Transect D 1	wetted width	.1		1 Channel Feature :	
2	5 m	.2		2 Run	
3		.4		3	
4	measurements	.3		4 Dissolved Oxygen	
5	.5 m	.3		5	
6	apart	.3		6 8.1	ppm
7		.2		7 91	%
8		.2		8	
9		.1		9	
10		.1		10	
				11	
Transect E 1	wetted width	.1		12 Channel Feature :	
2	5.5 m	.2		13 Run	
3		.3		14	
4	measurements	.3		15 Dissolved Oxygen :	
5	.55 m	.3		16	
6	apart	.3		17 8.0	ppm
7		.2		18 90	%
9		.2		19	
9		.2		20	
10		.1		21	
				22	
Transect F 1	wetted width	.1		23 Channel Feature :	
2	6 m	.2		24 Run	
3		.3		25	
4	measurements	.3		26 Dissolved Oxygen	
5	.6 m	.3		.	
6	apart	.3		. 8.1	ppm
7		.3		. 91	%
8		.3		.	
9		.2		n	
10		.1			

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the middle rank is the median depth.

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depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA
datasheet is true and accurate.

Signed: _Ryan Mc Lenn_   Date: _05-27-07_

Organization: _SETL_   Position: _E Environmental_

February 5, 2007   Scientist   Page 25

Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 3

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect G 1	wetted width	.1			1 Channel Feature :	
2	5.5 m	.2			2 Run	
3		.1			3	
4	measurements	.3			4 Dissolved Oxygen	
5	.55 m	.3			5	
6	apart	.3			6 8.5	ppm
7		.3			7 90 %	
8		.3			8	
9		.3			9	
10		.2			10	
Transect H 1	wetted width	.3			11	
2	5 m	.4			12 Channel Feature :	
3		.5			13 Run	
4	measurements	.4			14	
5	.5 m	.3			15 Dissolved Oxygen:	
6	apart	.3			16	
7		.3			17 8.6	ppm
8		.3			18 91 %	
9		.2			19	
10		.2			20	
Transect I 1	wetted width	.1			21	
2	10 m	.1			22	
3		.1			23 Channel Feature :	
4	measurements	.2			24 Run	
5	10 m	.2			25	
6	apart	.3			26 Dissolved Oxygen	
7		.4			.	
8		.4			. 8.6	ppm
9		.4			. 91 %	
10		.4			n	

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Signed: _Ryan M. Lunt_   Date: _05-27-07_

Organization: _SETI_   Position: _Environmental Scientist_

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Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

WBID # 484   Site # 3

	Distance from Stream edge	Depth	Rank		Assigned Rank	Sorted depth
Transect I 1	wetted width	.1			1	Channel Feature:
2	4 m	.1			2	Riffle
3		.3			3	
4	measurements	.3			4	Dissolved Oxygen
5	4 m	.3			5	
6	apart	.4			6	8.5 ppm
7		.3			7	89 %
8		.3			8	
9		.3			9	
10		.2			10	
Transect II 1	wetted width	.2			11	
2	6.5 m	.3			12	Channel Feature:
3		.2			13	Run
4	measurement	.3			14	
5	.65 m	.3			15	Dissolved Oxygen:
6	apart	.3			16	
7		.3			17	8.0 ppm
8		.3			18	91 %
9		.1			19	
10		.1			20	
Transect 1	wetted width				21	
2	m				22	
3					23	Channel Feature:
4	measurements				24	
5	m				25	
6	apart				26	Dissolved Oxygen
7					.	
8					.	ppm
9					.	%
10					n	

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Signed: _Ryan M. List_   Date: _05-27-07_

Organization: _SETE_

February 5, 2007   Position: _Environmental Scientist_   Page 25

Upstream (Site 1) of Tributary to Wilson Creek

Downstream (Site 1) of Tributary to Wilson Creek

Upstream (Site 2) of Tributary to Wilson Creek

Downstream (Site 2) of Tributary to Wilson Creek

Upstream (Site 3) of Tributary to Wilson Creek

Upstream (Site 3) of Tributary to Wilson Creek